

PI 基高 Tg 無鹵素覆蓋膜

PI Base Halogen Free High Tg Coverlay

I. 主要特性 Features

1. 優異的耐熱性和耐化學品性 Outstanding thermal resistance and chemical resistance;
2. 優良的尺寸安定性 Good dimensional stability;
3. 良好的溢膠量控制有利於 FPC 壓合 Resin flow well controlled and be good for FPC lamination;
4. 無鹵無銻符合 ROHS 要求 Halogen free and antimony free, meets ROHS requirements;
5. 高玻璃化轉變溫度 High glass transition temperature;

II. 主要性能表 General Properties

Item	Material		Type	IF-HC 1320	IF-HC 1325	Remark		
Spec.	PI Film (μm)			12.5	12.5	Width 250mm,500mm Length 200m		
	Adhesive (μm)			20	25			
Properties	Test Item		Condition	Value	Value	StandardI	Test Method	
	Peel Strength (Kgf/cm)	A		90°	>0.6	>0.7	≥ 0.6	IPC-TM-650 2.4.9
		Chemical Resistance (%)	IPA	Dipping /10min	<4	<4	≤ 20	IPC-TM-650 2.3.2
			NaOH		<4	<4		
	HCl	<4	<4					
	Resin Flow (mm)		A	0.08~0.14	0.08~0.14	0.05~0.15	IPC-TM-650 2.3.17.1	
	Solder Resistance		288°C/10S /3 次	OK	OK	288°C/10S /3 次	IPC-TM-650 2.4.13	
	Dimensional Stability (%)	MD	Method B	-0.09~0.01	-0.11~0.01	$\leq \pm 0.15$	IPC-TM-650 2.2.4	
		TD		-0.07~0.03	-0.07~0.03			
	Volume Resistance ($\Omega\cdot\text{cm}$)		C-96/23/65	$> 1 \times 10^{14}$	$> 1 \times 10^{14}$	$\geq 10^{13}$	IPC-TM-650 2.5.17	
	Surface Resistance (Ω)			$> 1 \times 10^{12}$	$> 1 \times 10^{12}$	$\geq 10^{11}$		
	Dielectric Constant (2GHz)		C-24/23/50	<3.6	<3.6	≤ 4.0	IPC-TM-650 2.5.5.3	
	Dissipation Factor (2GHz)			<0.036	<0.036	≤ 0.04		
	Adhesive	Yang's Module (GPa)		A	3.09	3.09	-	IPC-TM-650 2.4.18.3
Elongation		A	9%	9%	-			
Tensile Strength(MPa)		A	57	57	-			
Tg(°C)		A	110	110	-	DMA		

注 Note : 1. 剝離強度、溢膠量和耐熱性的測試：Coverlay 與 FCCL 相壓合；

Testing peel strength, solder resistance and resin flow, coverlay is pressed on FCCL;

2. 以上所列數據僅供參考，詳見出貨報告。

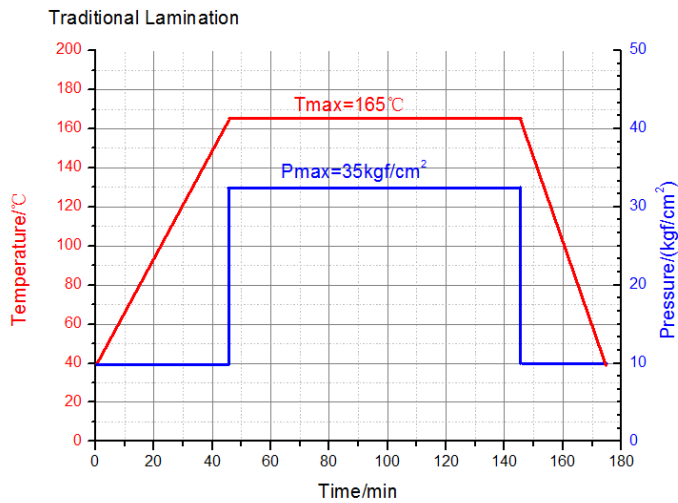
Data shown above are nominal values for reference only, for details please refer to COA

III. 儲存條件 Storage

真空包裝 10°C 以下，濕度 70%RH 以下，儲存 3 個月。Vacuum Packaging: Lower than 10°C and 70%RH for three months.

IV. 建議壓合程式及熟化程式 Recommended Press Process and Curing Process

1. 傳統壓合模式 Traditional lamination



Traditional lamination:

Stage I :

Temp: heating from 40°C to 165°C;

Pressure: 10Kgf/cm²;

Time: 45min.

Stage II :

Temp: 165°C;

Pressure: 35Kgf/cm²;

Time: 100min.

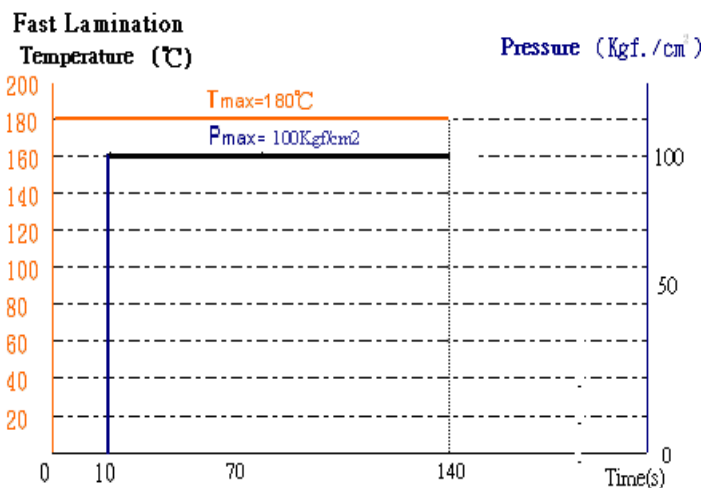
Stage III :

Temp: cooling down from 165°C to 40°C;

Pressure: 10Kgf/cm²;

Time: 30min.

2. 快速壓合模式 Fast lamination



Fast Lamination :

Stage I : Temp: 180°C;

Pressure: 0Kgf/cm²;

Time:10sec.

Stage II : Temp: 180°C;

Pressure: 100Kgf/cm²;

Time:120~150sec.

熟化程式 Curing Process



Curing Process :

Stage I :

Temp: heating from R.T. to 160°C;

Stage II :

Temp: maintain 160°C; Time: 60min.